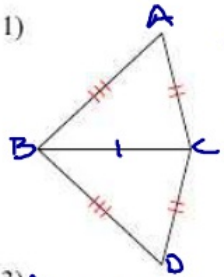
Assignments- Day 4 Triangle Congruence SSS, SAS Date_____ Period____

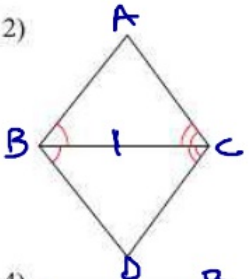
Given the following Triangles, determine if the two triangles are congruent by SSS, SAS, ASA, AAS or state that they are Not Congruent. State how you know. If they are, state the congruence and the transformation.

1)



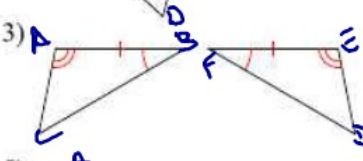
by SSS
$\triangle ABC \cong \triangle DBC$
Reflection.

2)



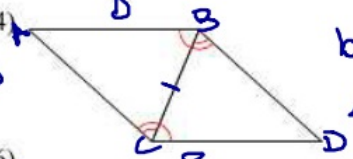
by ASA
$\triangle ABC \cong \triangle DBC$
Reflection.

3)



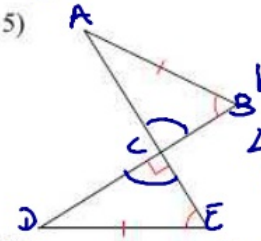
by ASA
$\triangle ABC \cong \triangle EFD$
Reflection

4)



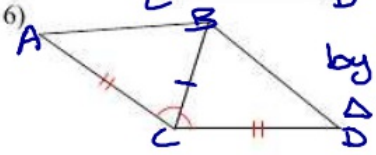
by ASA
$\triangle ABC \cong \triangle DCB$
Rotation.

5)



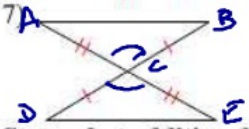
by AAS
$\triangle ABC \cong \triangle DEC$
Reflection.

6)



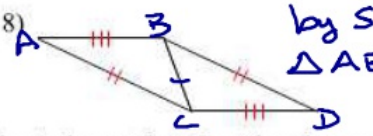
by SAS
$\triangle ABC \cong \triangle DBC$
Reflection

7)



by SAS
$\triangle ABC \cong \triangle EDC$
Rotation

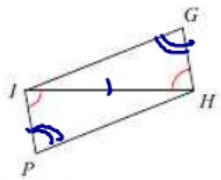
8)



by SSS
$\triangle ABC \cong \triangle DCB$
Rotation.

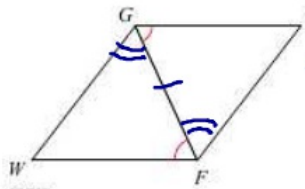
State what additional information is required in order to know that the triangles are congruent for the reason given.

9) AAS



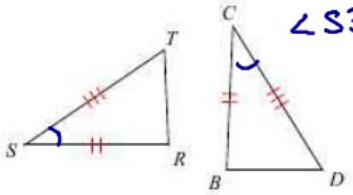
$\angle G \cong \angle P$

10) ASA



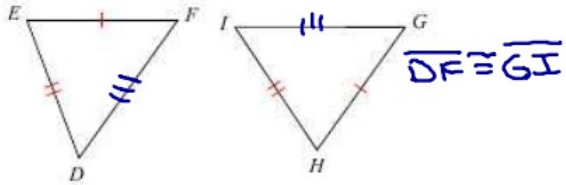
$\angle WGF \cong \angle HFG$

11) SAS



$\angle S \cong \angle C$

12) SSS



$\overline{DF} \cong \overline{GI}$

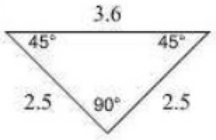
Sec I - Unit 4 Triangles Name_____ ID: 1

Triangles Review

Date_____ Period____

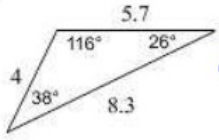
Classify each triangle by its angles and sides.

1)



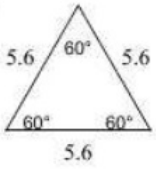
Right Isosceles

2)



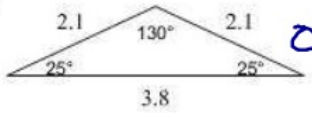
Obtuse Scalene

3)



Acute Equilateral

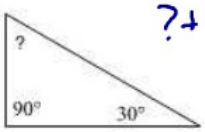
4)



Obtuse Isosceles

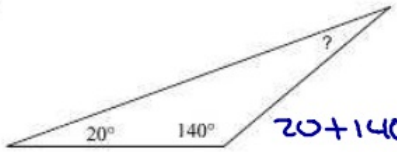
Find the measure of each angle indicated.

5)



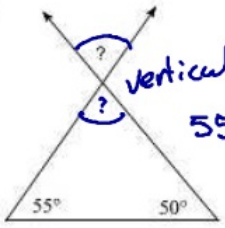
?+90+30=180
?+120=180
?=60°

6)



20+140+?=180
160+?=180
?=28

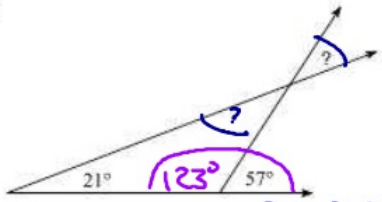
7)



vertical

55+50+?=180
105+?=180
?=75°

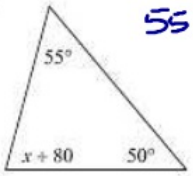
8)



21+123+?=180
144+?=180
?=36°

Solve for *x*.

9)



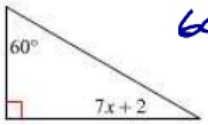
$55+50+x+80=180$

$x+185=180$

$-185\ \ -185$

$x=-5$

10)



$60+90+7x+2=180$

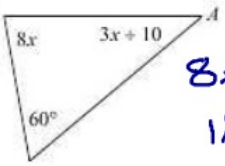
$7x+152=180$

$\frac{7x}{7}=\frac{28}{7}$

$x=4$

Find the measure of angle A.

11)



$8x+60+3x+10=180$

$11x+70=180$

$\frac{11x}{11}=\frac{110}{11}$

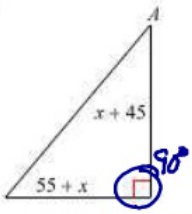
$x=10$

$m\angle A=3x+10$

$=3(10)+10$

$=40°$

12)



$x+45+55+x=90$

$2x+100=90$

$\frac{2x}{2}=\frac{-10}{2}$

$x=-5$

$m\angle A=x+45$

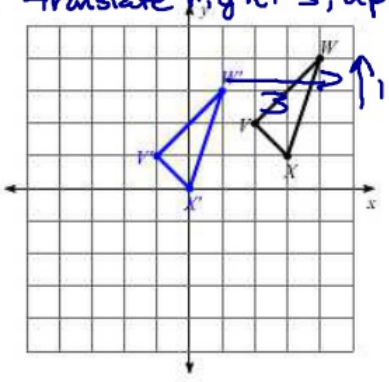
$=-5+45$

$=48$

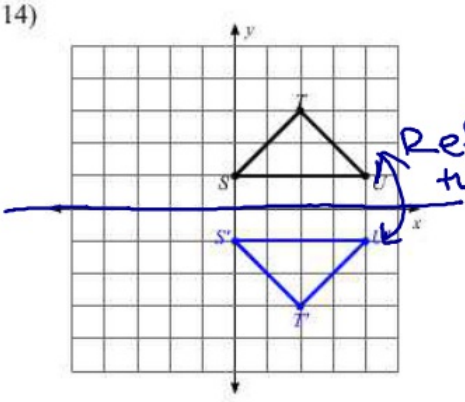
Given the pre-image and the new image, write a rule to describe each transformation.

Translation: **Reflection:**

13) translate right 3, up 1



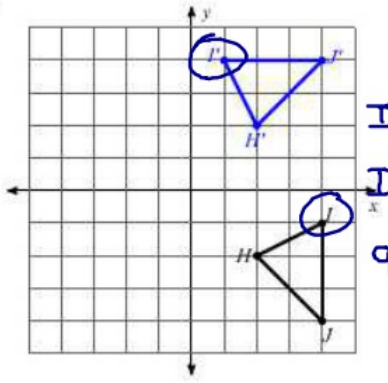
14)



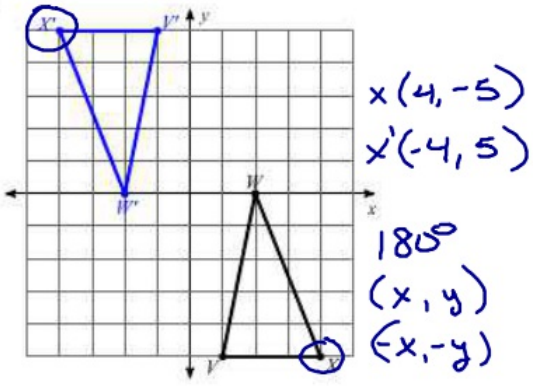
Reflect over the x-axis

Rotation:

15)

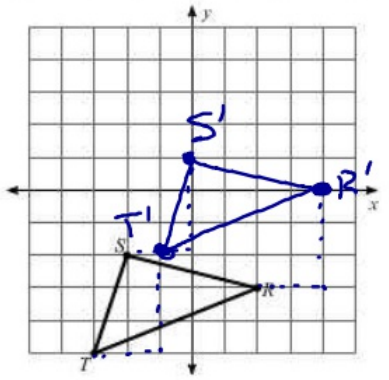


16)

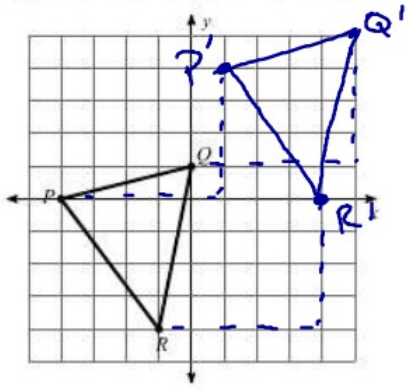


Given the pre-image and rule, graph the image of the figure using the transformation given.

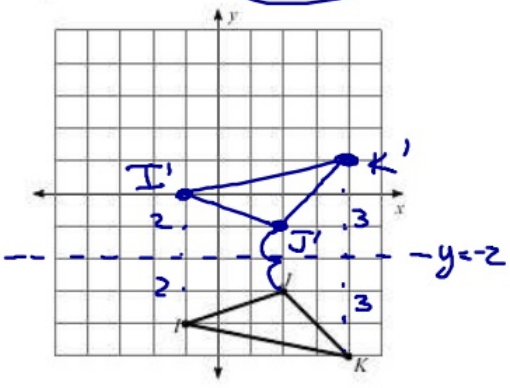
17) translation: 2 units right and 3 units up



18) translation: 5 units right and 4 units up



19) reflection across $y = -2$



20) rotation 90° clockwise about the origin